

## ABSTRACT OF THE DISCLOSURE

A communication system for mobile platforms includes mobile platforms with transceivers identified by Internet Protocol (IP) addresses. A satellite relays a forward link from a ground station to the mobile platforms. The forward link contains IP packet data that is modulated by variable length orthogonal (VLO) spreading codes and that has different information data rates. The VLO spreading code for each IP packet is selected to optimize a desired link margin of the IP packet that is received by the addressed transceiver. The IP packets can also be modulated using a pseudonoise (PN) spreading code. Forward error correction (FEC) may also be applied. The transceivers include a feedback circuit that generates an  $E_b/N_o$  estimate.

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